

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of: Takashi WATANABE
Appl. No.: (unassigned)
Filed: January 14, 2002
For: FEED SCREW DEVICE

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents January 14, 2002
Washington, DC 20231

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE ABSTRACT OF THE DISCLOSURE:

Please replace the Abstract of the Disclosure with the rewritten Abstract of the Disclosure attached on a separate sheet attached hereto.

REMARKS

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly requested.

Should there be any matters that need to be resolved in the present application, the Examiner is

respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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BC/lmt
Attachments

ABSTRACT OF THE DISCLOSURE

Both end parts of a feed screw device are movably supported through cushioning members, and an inertia force of the screw after a movable member moved by the screw has collided against a stopper is absorbed by a movement in an axial direction, so that an impact at a drive end can be softened. When the guide part comes into contact with the stopper and a projection lens barrel is positioned at an upper end of a moving stroke, an upward movement of the barrel is stopped, but a motor is in a rotating state. A driving power of the motor is continuously transmitted to the screw, but since an upward movement of a nut member is restricted, a downward movement force is given from the motor to the screw. Then, the screw moves downward against an urging force of a spring.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT OF THE DISCLOSURE:

The Abstract of the Disclosure has been amended as follows:

ABSTRACT OF THE DISCLOSURE

~~In the feed screw device, both~~Both end parts of a feed screw device are movably supported through cushioning members, and an inertia force of the feed screw after a movable member moved by the feed screw has collided against a stopper is absorbed by a movement in an axial direction ~~of the feed screw,~~ so that an impact at a drive end can be softened. When the guide part comes into contact with the stopper and a projection lens barrel is positioned at an upper end of a moving stroke, an upward movement of the ~~projection lens barrel~~ is stopped, but a motor is ~~not stopped and is~~ in a rotating state. A driving power of the motor is continuously transmitted to the feed screw, but since an upward movement of a nut member is restricted, a ~~force of a downward movement~~ force is given from the motor to the feed screw. Then, the feed screw moves downward against an urging force of a spring. ~~By this action, an~~

~~impact force at the time when the guide part comes into
contact with the stopper is softened.~~